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09/583,672	05/31/2000	Bruce Hodge	56129050-3	2979

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EXAMINER	
KISS, ERIC B	
ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 09/583,672	**Applicant(s)** HODGE, BRUCE	
	Examiner Eric B. Kiss	**Art Unit** 2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2004*.

2a)☒ This action is **FINAL**. 2b)□ This action is non-final.

3)□ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13-18 and 20-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)□ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13-18 and 20-23* is/are rejected.

7)□ Claim(s) _____ is/are objected to.

8)□ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)□ The specification is objected to by the Examiner.

10)□ The drawing(s) filed on _____ is/are: a)□ accepted or b)□ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)□ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)□ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)□ All b)□ Some * c)□ None of:

1.□ Certified copies of the priority documents have been received.

2.□ Certified copies of the priority documents have been received in Application No. _____.

3.□ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) □ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) □ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) □ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) □ Notice of Informal Patent Application (PTO-152)

6) □ Other: _____.

DETAILED ACTION

1. The reply filed 23 August 2004 has been received and entered. Claims 1-11, 13-18, and 20-23 are pending.

Oath/Declaration

2. A replacement declaration has been received and entered. This declaration is acceptable.

Response to Amendment

3. Applicant's amendment to claim 22 appropriately addresses the objection to claim 22, based on an informality. Accordingly, this objection is withdrawn in view of Applicant's amendment.

4. Applicant's cancellation of claim 12 appropriately addresses the warning of possible objection to claim 14 as being a substantial duplicate of claim 12. Accordingly, this warning of possible objection is now moot.

5. Applicant's clarification of the term "life of a program" as

> starting from when the interpreter (or the like) is loaded into memory, while a script or a program (or the like) is parsed and executed, and end[ing] when the interpreter (or the like) is released from memory"

in Applicant's remarks (see page 9, second paragraph) is noted. Based on this definition, the Examiner is able to ascertain a meaningful scope for the affected claims. Accordingly, the rejection of claims 1-11, 13-18, 20, and 21, under 35 U.S.C. §112, second paragraph, based on indefiniteness, is withdrawn in view of Applicant's provided definition of "life of a program".

Response to Arguments

6. Applicant's arguments filed 23 August 2004 have been fully considered but they are not persuasive.

In response to Applicant's arguments on page 8, in the final paragraph, continuing onto page 9, the Examiner has considered the disclosure of U.S. Patent No. 6,678,745, issued on Application No. 09/583,673, incorporated by reference in the instant application. The Examiner notes that the cited patent (and application) discuss extensive use and manipulation of a symbol table, *i.e.*, additional information that would be referenced by an interpreter (see, for example, Fig. 1 (in both the Pseudo-Code block and the flow chart); col. 1, lines 40-47; col. 3, lines 25-31 and 60-65; col. 4, lines 17-22). Therefore, Applicant's argument that this document provides necessary enablement is not persuasive.

Admitted Prior Art

7. If Applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, Applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well-known statement was made. This is necessary because the Examiner must be given the opportunity to provide evidence in the next Office action or explain why no evidence is required. If the Examiner adds a reference to the rejection in the next action after applicant's rebuttal, the newly cited reference, if it is added merely as evidence of the prior well known statement, does not result in a new issue and thus the action can potentially be made final.

8. The object of the following statement is taken to be admitted prior art:

The use of program storage devices has been well known and practiced in software deployment and execution (see the unchallenged statement of Official Notice taken in the rejection of claim 1 in the previous Office action).

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1-11, 13-15, 20, and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites "the determining done without requiring additional referencing each time the object identifier having the type declaration is read" in lines 10-11. Applicant's original specification fails to disclose any information as specifically not needed during subsequent reading of an object identifier.

Claims 2-11, 13-15, 20, and 21 are rejected based on the inherited base claim limitation recited in claim 1 and rejected as set forth above.

11. Claims 1-11, 13-15, 20, and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites "the determining done without requiring additional referencing each time the object identifier having the type declaration is read" in lines 10-11. When a variable is used again after its initial declaration in a program, conventional programming techniques require that some means of reference be provided to determine that the same variable is being used as before, either during compilation or during execution by an interpreter. For example, when an integer variable to be used as a simple counter is declared, a specific location in memory (or a pointer to that location) is allocated to store the value of that variable. When an instruction is processed that increments the counter variable, a reference must be read to determine that the variable has already been declared and a specific address (or a pointer to that address) storing the data associated with the variable must be determined to store the updated result. Applicant's specification fails to provide an alternative means of synchronizing data updates for a variable that does not require any additional referencing when the variable instance is read, nor would such knowledge be generally available or well known. Therefore, one of ordinary skill in the art would not be able to practice the invention as claimed.

Claims 2-11, 13-15, 20, and 21 are rejected based on the inherited base claim limitation recited in claim 1 and rejected as set forth above.

12. In the rejections based on Prior Art contained in this office action, the aforementioned claim limitations upon which the rejections under 35 U.S.C. §112, first paragraph, are based, are ignored for the purpose of further examination.

Claim Rejections - 35 USC § 103

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14. Claims 1-4, 6-9, 11, 13-18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over "DynaPage Brief Synopsis", February 1998 (hereinafter *DPBS*) and "DynaScript Code Example," February 1998 (hereinafter *DSCE*) in view of admitted prior art and further in view of Andrew C. Staugaard, Jr., "Structured and Object-Oriented Techniques: An Introduction Using C++," 1997, Prentice Hall (hereinafter *Staugaard, Jr.*).

a) "DynaPage Brief Synopsis" describes the DynaPage dynamic page interpreter product and is hyperlinked to "DynaScript Code Example," which is apparently intended to provide an example of a page created with the programming language provided by the DynaPage product (see *DPBS*, second sentence). As these documents are disclosed as describing/illustrating features of the same product, the motivation to combine the teachings of the two documents is readily apparent, i.e., the inventor of the product has already combined the features disclosed by both documents, as such is disclosed in the documents themselves.

b) As per claim 1, *DPBS* and *DSCE* disclose allowing a type declaration in a programming language to be embedded within an object identifier (see, for example, *DSCE*, line, 7, disclosing a "URL@CustNumber" object identifier); and allowing the type declaration to be delimited from the object identifier using a joint attribute (see, for example, *DSCE*, line, 7, disclosing a "URL@CustNumber" object identifier having an "@" character joint attribute), the joint attribute used by an interpreter or a compiler of the programming language to separate the type declaration from the object identifier to determine an object type of an object being declared in the object identifier when the object identifier having the type declaration is read (see, for example, *DSCE*, line, 6, disclosing "URL@" as a variable type); and allowing the object identifier with the embedded type declaration to be used throughout a life of a program as a syntax for referencing an object in the program (see, for example, *DSCE*, lines 30-39, disclosing the repeated use of the "STR@Cmd" variable using the same syntax each time).

DPBS and *DSCE* fail to expressly disclose the use of program storage device readable by a machine. However, it is admitted prior art that the use of such program storage devices has been well known and practiced in software deployment and execution. Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to include the use of a program storage device tangibly embodying the product and code disclosed by *DPBS* and *DSCE*. One would be motivated to do to employ established means of making such program instructions available to a computer system for execution.

DPBS and *DSCE* fail to expressly disclose allowing the object identifier to further include at least an object identifier and a method identifier, the method identifier being a method associated with the determined object type. However, *Staugaard, Jr.* teaches that it is well known for a method identifier to accompany an object identifier (see, for example, the discussion of messages on pp. 483-485). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to include such use of method identifiers as taught by *Staugaard, Jr.* One would be motivated to do so to utilize an existing well-known syntax for calling member functions of an object.

c) As per claim 2, the program instructions disclosed by *DSCE* are inherently parsed and translated by the DynaPage dynamic page interpreter disclosed in *DPBS*. Therefore, for reasons stated above, such a claim also would have been obvious.

d) As per claims 3, 4, 6, 7, and 9, *DPBS* and *DSCE* further disclose the type declaration including a SQL database object type (see, for example, *DSCE*, line 9); a cursor database object type (see, for example, *DSCE*, lines 41-42); a universal resource locator object type (see, for example, *DSCE*, line 7); and a hypertext markup language object type (see, for example, *DSCE*, lines 12 and 15). Therefore, for reasons stated above, such claims also would have been obvious.

e) As per claim 8, although *DSCE* fails to expressly disclose an environment object type, *DPBS* further discloses accessing environment variables. Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to include an environment object type to represent such environment variables. One would be motivated to do so to support such a variable type in a manner consistent with the syntax of other variable references.

f) As per claims 11, 13, and 14, *DPBS* and *DSCE* further disclose the joint attribute being concatenated to the type declaration and the object identifier being concatenated to the joint attribute (see, for example, *DSCE*, line 7). Therefore, for reasons stated above, such claims also would have been obvious.

g) As per claim 15, *DPBS* and *DSCE* further disclose the object identifier including dynamically evaluated expressions (see, for example, *DSCE*, lines 29-30). Therefore for reasons stated above, such a claim also would have been obvious.

h) As per claim 20, *DPBS* and *DSCE* further disclose the type declaration allowing a compiler or interpreter of the programming language to operate on an object declared in the type declaration without an explicit call to construct the object (see, for example, *DSCE*, line 30, showing the initial use of the "STR@Cmd" variable without any prior explicit call to create the variable; see also *DPBS*, describing the use of the DynaPage interpreter). Therefore for reasons stated above, such a claim also would have been obvious.

i) As per claim 21, *DPBS* and *DSCE* further disclose the type declaration allowing a compiler or interpreter of the programming language to automatically instantiate an object being declared in the type declaration when the type declaration embedded with the object identifier is first read by the programming language compiler or interpreter (see, for example, *DSCE*, line 30, showing the initial use of the "STR@Cmd" variable without any prior explicit call to create the variable; see also *DPBS*, describing the use of the DynaPage interpreter). Therefore for reasons stated above, such a claim also would have been obvious.

j) As per claim 16, *DPBS* and *DSCE* disclose embedding an object type indicator with an object identifier name, the object type indicator and the object identifier name delimited by a predefine symbol (see, for example, *DSCE*, line, 7, disclosing a "URL@CustNumber" object identifier having an "@" character joint attribute), wherein a machine uses the predefined symbol to separate the object type indicator and the object identifier name to identify an object type for the object identifier name and the object identifier name having the object type indicator is used throughout a life of a program as a syntax for referencing an object in the program (see, for example, *DSCE*, lines 30-39, disclosing the repeated use of the "STR@Cmd" variable using the same syntax each time). Therefore, for reasons stated above (see item 18a), such a claim also would have been obvious.

DPBS and *DSCE* fail to expressly disclose allowing the object identifier to further include at least an object identifier and a method identifier, the method identifier being a method associated with the determined object type. However, *Staugaard, Jr.* teaches that it is well known for a method identifier to accompany an object identifier (see, for example, the discussion of messages on pp. 483-485). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to include such use of method identifiers as taught by *Staugaard, Jr.* One would be motivated to do so to utilize an existing well-known syntax for calling member functions of an object.

k) As per claim 18, *DPBS* and *DSCE* further disclose joining the object type indicator with the object identifier name with a joint symbol (see, for example, *DSCE*, line, 7, disclosing a

"URL@CustNumber" object identifier having an "@" character joint attribute). Therefore, for reasons stated above, such a claim also would have been obvious.

l) As per claim 17, *DPBS* and *DSCE* disclose prepending an object type followed by a predefined symbol to an object identifier string, the object type, the predefined symbol, and the object identifier string forming a symbol name to be carried throughout a life of a program as a syntax for referencing an object in the program (see, for example, *DSCE,* lines 30-39, disclosing the repeated use of the "STR@Cmd" variable using the same syntax each time), wherein a machine interpreting the symbol name in the program uses the predefined symbol to delineate the object type from the object to determine the object type (see, for example, *DSCE*, line, 6, disclosing "URL@" as a variable type). Therefore, for reasons stated above (see item 18a), such a claim also would have been obvious.

DPBS and *DSCE* fail to expressly disclose allowing the object identifier to further include at least an object identifier and a method identifier, the.method identifier being a method associated with the determined object type. However, *Staugaard, Jr.* teaches that it is well known for a method identifier to accompany an object identifier (see, for example, the discussion of messages on pp. 483-485). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to include such use of method identifiers as taught by *Staugaard, Jr.* One would be motivated to do so to utilize an existing well-known syntax for calling member functions of an object.

m) As per claim 22, *DPBS* and *DSCE* disclose integrating an explicit object type definition within a string of characters that define an object symbol name that is used throughout a program for referencing an object (see, for example, *DSCE*, lines 30-39, disclosing the repeated use of the "STR@Cmd" variable using the same syntax each time), the object type definition delineated by an additional predefined symbol in the string of characters, the additional predefined symbol being an explicit symbol separate from the explicit object type definition (see, for example, *DSCE*, line, 7, disclosing a "URL@CustNumber" object identifier having an "@" character joint attribute), wherein a machine interpreting the object symbol name throughout the program determines what type the object symbol name is by recognizing the additional predefined symbol in the string of characters and reading the explicit object type definition in the string of characters (see, for example, *DSCE*, line, 6, disclosing "URL@" as a variable type).

DPBS and *DSCE* fail to expressly disclose the use of program storage device readable by a machine. However, it is admitted prior art that the use of such program storage devices has been well known and practiced in software deployment and execution. Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to include the use of a program storage device tangibly embodying the product and code disclosed by *DPBS* and *DSCE*. One would be motivated to do to employ established means of making such program instructions available to a computer system for execution.

DPBS and *DSCE* fail to expressly disclose allowing the object identifier to further include at least an object identifier and a method identifier, the method identifier being a method associated with the determined object type. However, *Staugaard, Jr.* teaches that it is well known for a method identifier to accompany an object identifier (see, for example, the discussion of messages on pp. 483-485). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to include such use of method identifiers as taught by *Staugaard, Jr.* One would be motivated to do so to utilize an existing well-known syntax for calling member functions of an object.

n) As per claim 23, in addition to the disclosure and teachings applied above, *DPBS* and *DSCE* fail to expressly disclose an automatic variable type being a general type initially and being assigned a type associated with one or more assigned values. However, *Staugaard, Jr.* teaches such variable typing in which a constructor is used to instantiate an object based on parameters (see, for example, the discussion of constructors on pp. 472-478, and in particular, the discussion of constructor overloading on pp. 475-478). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to include such use of automatic variable typing as taught by *Staugaard, Jr.* One would be motivated to do so to utilize an existing well-known technique for flexibly creating objects.

15. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *DPBS* and *DSCE* in view of admitted prior art and *Staugaard, Jr.*, as applied to claim 1 above, and further in view of Breck Carter, "Tip 85: Java in the Database (5) Cross-Server Database I/O," December 1998 (hereinafter *Carter*).

As per claim 5, *DPBS* and *DSCE* fail to expressly disclose a connection database object type. However, *Carter* teaches a connection database object type (ASAConnection class; see, for example, pages 2-5). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to include a connection database object type into the product and code of *DPBS* and *DSCE* as per the teachings of *Carter*. One would be motivated to do so to provide a means for establishing and referencing database connections through a simplified interface in a manner consistent with the syntax of other variable references.

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *DPBS* and *DSCE* in view of admitted prior art and *Staugaard, Jr.*, as applied to claim 1 above, and further in view of Samuel R. Blackburn, "WFC - CextensibleMarkupLanguageElement," September 1998, (hereinafter *Blackburn*).

As per claim 10, *DPBS* and *DSCE* fail to expressly disclose an extensible markup language object type. However, *Blackburn* teaches an extensible markup language object type (CExtensibleMarkupLanguageElement class; see, for example, page 1, paragraph 1). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to include an extensible markup language markup object type into the product and code of *DPBS* and *DSCE* as per the teachings of *Blackburn*. One would be motivated to do so to provide a means for parsing and outputting the elements that make up an XML document through a simplified interface in a manner consistent with the syntax of other variable references.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EBK /EBK
November 18, 2004

WEI Y. ZHEN
PRIMARY EXAMINER